Embracing a Research-Based Culture: Best Practices to Implementing Evidence-Based Practices

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Objectives

- Implementing reporting and other quality initiatives to cultivate a research-based culture
- Educating staff to ensure continuous evidence based development
- Assigning responsibilities to emerging leaders to facilitate process mentorship

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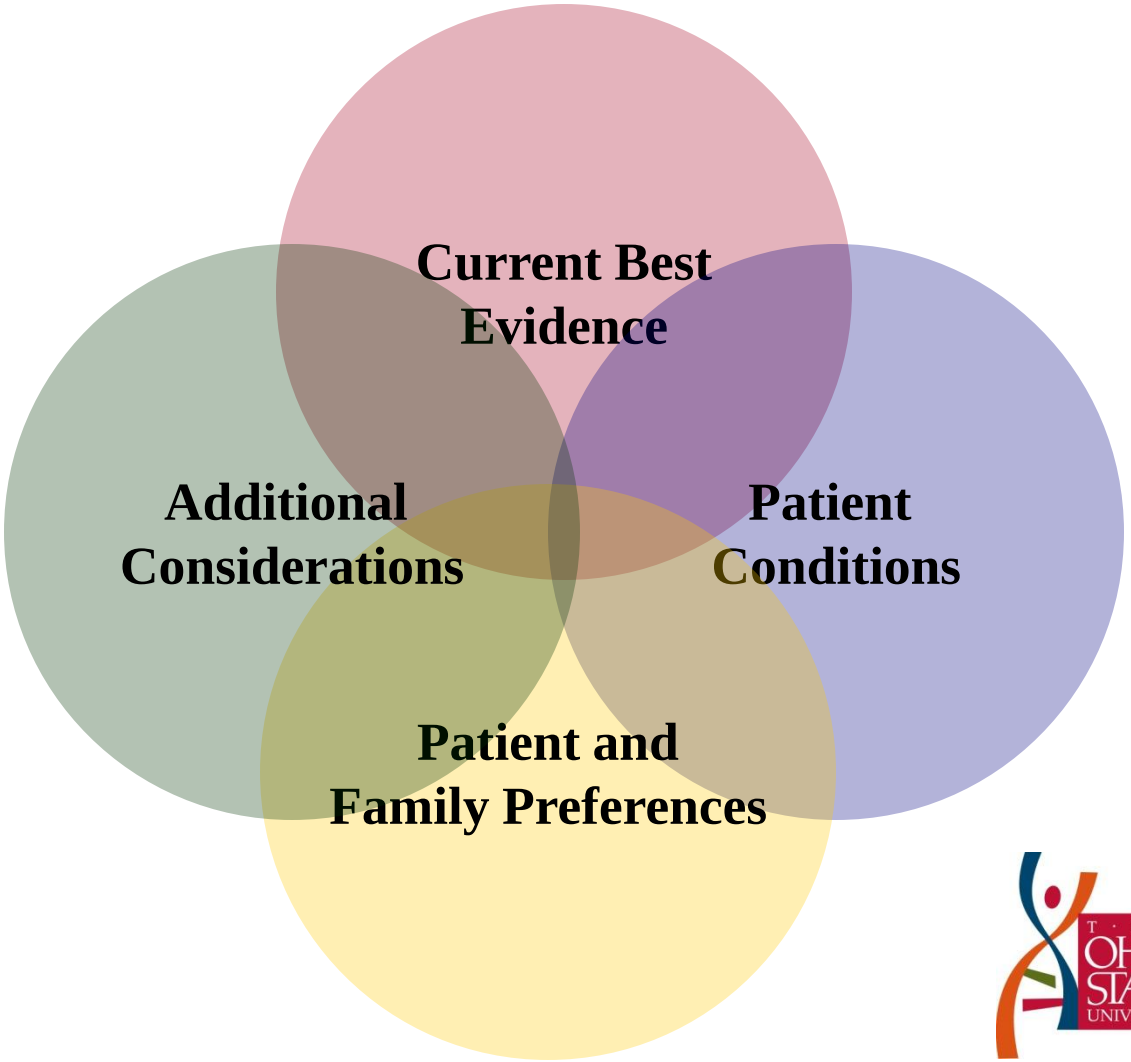
Components of Evidence-Based Practice



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Importance and Benefits of Evidence-Based Practice

- Assist in complying with JCAHO standards
- ANCC Magnet Recognition Program criteria
- Federal funding
- Consumer expectations
- Policy makers
- Quality Care
- Cost savings and cost avoidance
- Tradition-based to evidence-based practice
- Empowerment and increased perceived professionalism of the staff

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Practices Not Supported by Evidence

- Restricted visiting patients in ICU – every 2 hours; 10 minute visits; immediate family members; no children
  - Flexible visiting practices
- Shoe covers necessary in the OR to reduce infection transmission
  - No studies to support this

(Cohen et al, 1998; Halm et al, 1990; Titler, 1999; Titler et al, 1995; Titler, 1995; Titler & Walsh, 1992; Titler et al, 1991)

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Where Are We?

"We invest billions in research to find appropriate treatments, we spend more than $1 trillion on healthcare annually, we have extraordinary capacity to deliver the best care in the world, but we repeatedly fail to translate that knowledge and capacity into clinical practice"

(IOM, 2003 "Priority Areas for National Action";
Berg et al, 1997; Dickerson & Manheimer, 1998; Kamerow, 1997)

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Examples

- Fewer than half of adults >50 years of age received recommended screening tests for colorectal cancer
- Inadequate care after a heart attack results in 18,000 unnecessary deaths per year
- 17 million people were informed by their pharmacist that the drugs that were prescribed could cause an interaction

(IOM, 2003)

Robert Wood Johnson Foundation

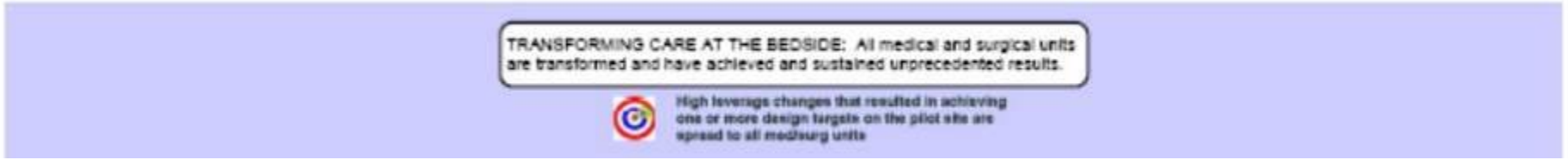
Examples

- Failure to rescue, decubitus ulcers, and post-op sepsis account for 60% of all patient safety incidents among Medicare patients hospitalized (2000 – 2002)
- Decubitus ulcers account for $2.57 billion in excess inpatient costs to Medicare over 3 years (2000 – 2002)
- Post-op pulmonary embolism or DVT account for $1.4 billion in excess inpatient costs to Medicare over 3 years (2000 – 2002)

(Patient Safety in American Hospitals, Health Grades Quality Study, 2004)

Transforming Care at the Bedside

July 10, 2007



- Safe and reliable care
- Vitality and teamwork
- Patient-centered care
- Value-added care processes

(Institute for Healthcare Improvement, 2004)

Characteristics of Adoption

Multifaceted strategies are necessary to translate research into Practice

(Greenhalgh et al, 2005)

- Complexity of EBP
- Compatibility with needs of users
- Use of quick reference guides and decision aides
- Use of clinical reminders
- Communication
- Change Champions
  - Role models
  - Point of Care Coaching
  - Educational outreach
  - Education alone is not effective
- Nurses like to learn from one another

(Titler, M.G.; Everett, L.Q, 2006)

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Key Points
Evidence-Based Practice

- Attributes of the EBP topic as perceived by users and stakeholders (e.g., ease of use, valued part of practice) are neither stable features nor sure determinants of their use
- Rather it is the interaction among characteristics of the EBP topic, the intended users, and a particular context of practice that determines the rate and extent of adoption

(Greenhalgh et al., 2005, Titler & Everett, 2001; Rogers, 2003)

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Staff Nurse Role

- Part of T-E-A-M
- Empowered
- Autonomous
- Patient focused
- Quality and Safety Champion- front line advocate

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Staff Development – Educator Role

- Creative ways of imparting new information to increase nurses' knowledge of EBPs (e.g., every four hour pain assessment)
- Annual competencies
- Ground rounds – critique the evidence
- Educational series on process of EBP
- Skills reviews – are the practices evidence-based?

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Nurse Manager Role

- Nurse Manager / Assistant Nurse Manager – conductors of unit
  - Must be a team advocate and include staff
  - Need development regarding EBP from multiple sources
  - Formal leadership
  - Building the unit team
  - Unit goals for planned change
- Open communication
- Shared Governance – Team
- Stay ahead of the culture by creating the culture

Advanced Practice Nurse Role

- Primary mentor
- Clinical expert
- EBP expert
- Planning, leading, and coaching
- Problem solving

Nurse Executive Role

- Vision
- Champion
- Catalyst
- Connector
- Influencer
- Encourage CFO to be Quality Champion

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Business Case for EBP
CMS / Medicare Examples

- Five types of adverse events lead to a total additional cost of $313 million per year
  - Decubitis ulcers adds $735/case; total impact is $16.4 million
  - Post-op PE and DVT adds $2,520; total impact is $95 million
  - Postoperative sepsis adds $8,881/case; total impact is more than $59.2 million

(Zhan, et.al., 2006)

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Business Case for EBP

- Cost avoidance
  - Avoiding use of products, equipment, or healthcare interventions that are not helpful/effective. Avoidance of waste or redundancy.
    - Bed alarms for fall reduction – evidence is inconclusive
    - Reduction in adverse events – falls, pressure ulcers, nosocomial infections

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Business Case for EBP

- Cost reduction – saving dollars by instituting an EBP intervention that saves healthcare dollars
  - Ergonomics
  - Staff retention
  - Pain management practices
- Cost benefit – benefits of a program or intervention (outcomes) in comparison to the cost of the program and competing alternatives for use of the dollar
  - Exercise programs in the work setting

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Creating a Culture to Support EBP

- Mission / Vision for delivery of EBP care
- Determine who has primary responsibility for EBP within your organization (Shared Governance)
- Share ideas for supporting EBP
- High visibility of EBP care
  - Communicate from / with senior leadership
  - Publications
  - Recognize and reward staff
  - Public “Bravos”

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Organizational Focus

- Structure
- Resources
- Systems that provide support
- Concurrent monitoring of critical indicators
- Data needs to be perceived by clinicians that it is valid and reliable

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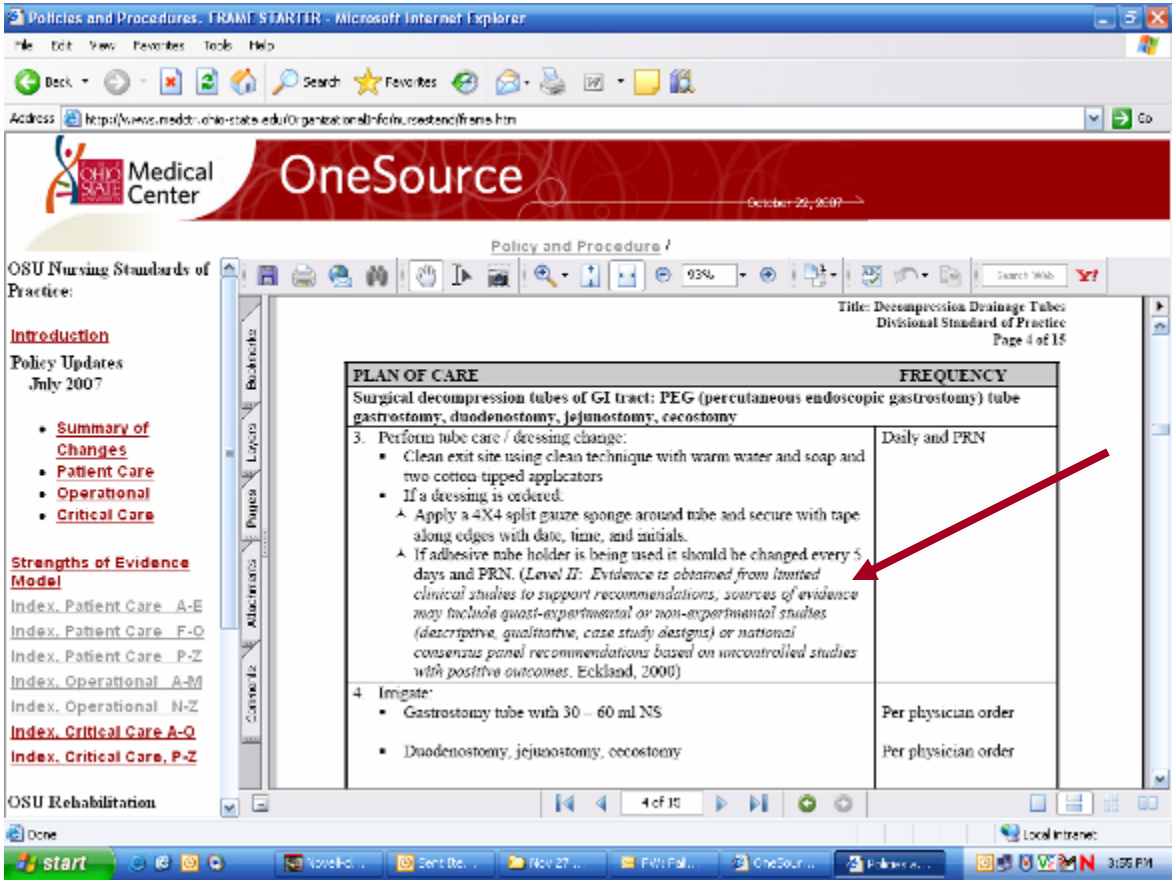
Integrate into Practice Policies

- Expert Opinions
- Research
- Literature
- Networking



Implementing & Evaluating the Impact

- Transparent outcomes data posted
- Evaluation
  - So What?
  - Did the practice change to improve patient care
  - Were outcomes consistent with outcomes of research
  - Result in cost savings

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Ohio State University Medical Center Mission

To improve people's lives through innovation in research, education and patient care

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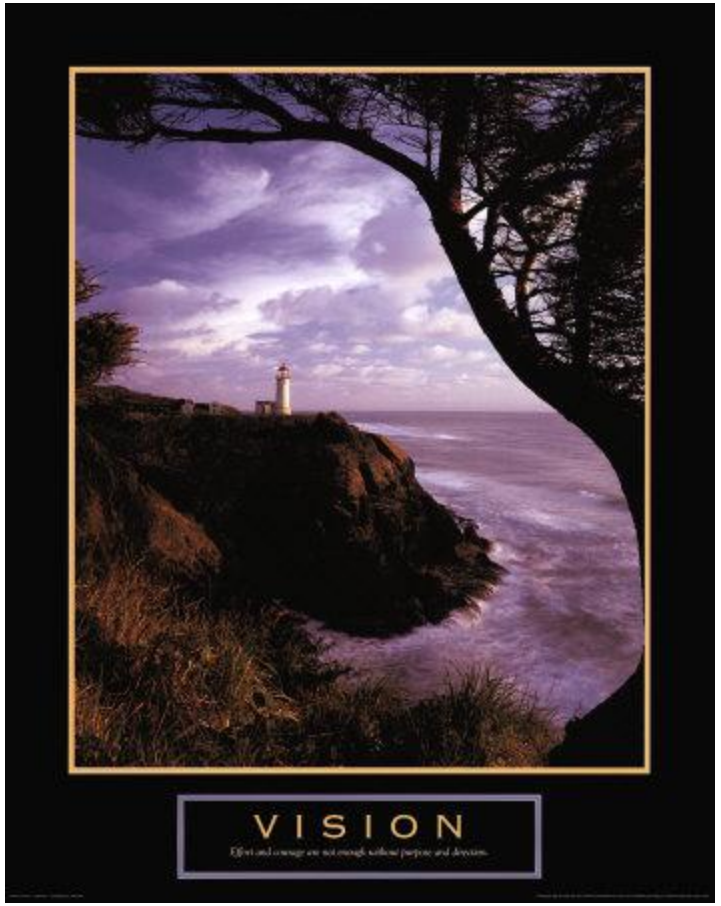
Ohio State University Medical Center Vision

Working as a team,
we will shape the future of medicine by creating, disseminating and applying new knowledge, and by personalizing health care to meet the needs of each individual.



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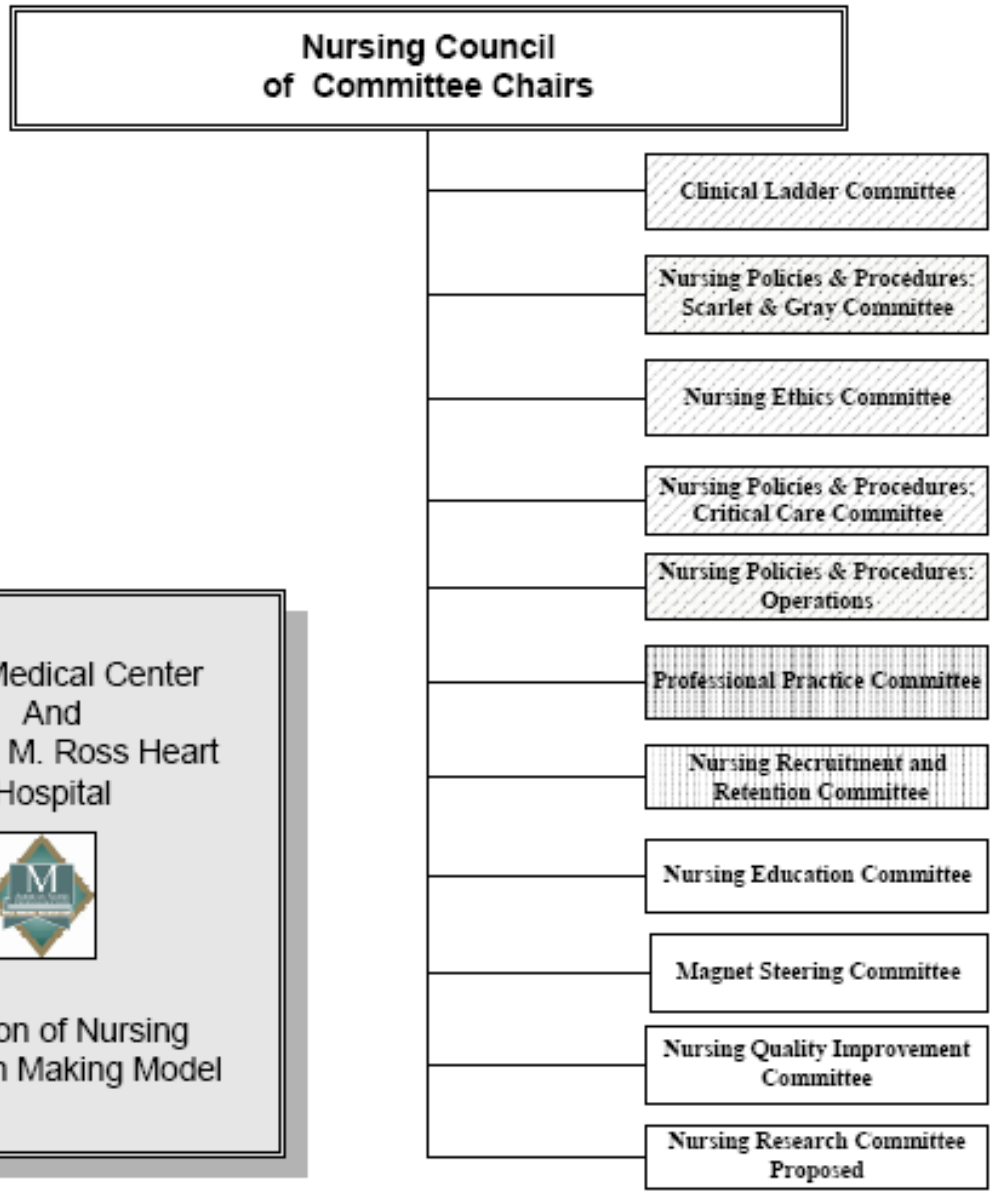
OSU Medical Center
And
Richard M. Ross Heart
Hospital

Division of Nursing
Decision Making Model



Systemwide

By Contract

UH/Ross Only

Prepared by The Center for Nursing Excellence/clc/2007

Geographic Clustering

- Evidence demonstrates quality improvements will be realized
  - Decrease LOS
  - Increase patient satisfaction
  - Increase staff satisfaction
  - Communication between care teams improved

(Litch, B.K., The Re-emergence of clinical service line management, Healthcare Executive, July/Aug, 2007)

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Current Primary Services

Current Primary Services	Units	Capacity (Beds)	ADC (Mean)	SD
Neuro / Neuro-Surg / ID	11 East Rhodes	38	25.7	6.3
Med1 / Med2 / Med5 / Med7	10 West Doan	24	26.5	4.0
Surg1 / Surg2	10 East Doan	27	25.1	6.1
NP1 / NP2 / Med6	9 West Rhodes	27	32.2	4.6
Plastic Surgery / ENT / GU / OMFS Opthal-Burn	9 West Doan	22	11.4	4.3
Orth Surg / Surg6	10 East Rhodes	38	17.1	4.7
Benign HEM / GE1 / GE2 / Med3	11 East Doan	26	24.5	4.5
TRM / TRO / TRR	9 East Rhodes	30	26.7	5.4

Units with capacity available

Units with no capacity

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Team Members

- Associate Executive Officer
- Chief Medical Officer
- Associate Medical Director
- Chief Nursing Officer
- Director Hospital Medicine
- Administrative Director
- Management Engineer

Proposed Primary Services

Proposed Primary Services	Units	Capacity (Beds)	ADC (Mean)	SD
Med6 / Med5 / HH1	11 East Rhodes	38	29.7	5.0
Med1 / Med2	10 West Doan	24	13.9	2.8
Surg1 / Surg2	10 East Doan	27	25.1	6.1
Med7 / Genmed3 / NP1	9 West Rhodes	27	23.4	3.4
Neuro / Neuro-Surg / Trauma / Ortho	10 East Rhodes and 10 West Rhodes	49	42.8	7.5
Plastic Surgery / ENT / GU / OMFS / Opthal / Burn	9 West Doan	22	11.4	4.3
Benign HEM / GE1 / GE2 / ID	11 East Doan	26	24.8	4.3
TRM / TRO / TRR	9 East Rhodes	30	26.7	5.4

Implementation Plan

- Decision to implement “Big Bang” vs. slow roll out
  - February 1, 2008
  - Will not move patients
  - After 1st week if patients are not on correct service will consider moving if discharge not impending

Expectations

- Clinical services to be placed on primary assigned unit 80% of the time
- ED patients will be placed in a bed within 4-hours
- Multidisciplinary rounding to occur daily
- Decrease in LOS 0.3 days

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Communication Plan

- Meetings
  - Physician and key stakeholders
  - Ohio Nurses Association
  - Nurse Managers
  - Individual Units
- Broadcast e-mails
  - Supervisory Council
  - All nursing staff
- Open Staff Forums
- Informational link on internal website

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Education Plan

- Developed F.A.Q.
- Open door with Chief Nursing Officer
- Individual education with units, may vary depending on needs

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Multiple Teaching Strategies

- Walking rounds
- Manager open forums
- Town hall meetings
- Staff meetings

Sustaining / Re-infusion of Practice Quality Improvement

- Incorporating day to day activities into normal workflow that are not an “add on”
  - Patient Rounds
  - Assignment sheets with nurse contact information
  - Standardized organization of nursing station
  - Patient care conferences
  - All disciplines charting on same chart
  - Build into current systems
  - Unit ownership of practice
  - Daily, monthly, quarterly follow-up
  - Updating Policy and Procedure

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Sustaining Practice Unit Routines

- Staff meetings
- CNO newsletters and forums
- Recognition and rewards – making a difference
- MD collaborative practices

Evaluate the Impact

- Monthly evaluation and timely outcome data sharing
  - Overall LOS
  - Patient placement
  - ED LOS

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University of Iowa Hospitals and Clinics Mission

University of Iowa Hospitals and Clinics, in concert with the University of Iowa health science colleges, functions in support of health care professionals and organizations in Iowa and other states by:

- Offering a broad spectrum of clinical services to all patients cared for within the center and through its outreach programs
- Serving as the primary teaching hospital for the University
- Providing a base for innovative research to improve health care

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University of Iowa Health Care

University of Iowa Hospitals and Clinics Vision

We will be the Midwest hospital that people choose for innovative care, excellent service, and exceptional outcomes. We will be an internationally recognized academic medical center in partnership with the UI Carver College of Medicine.

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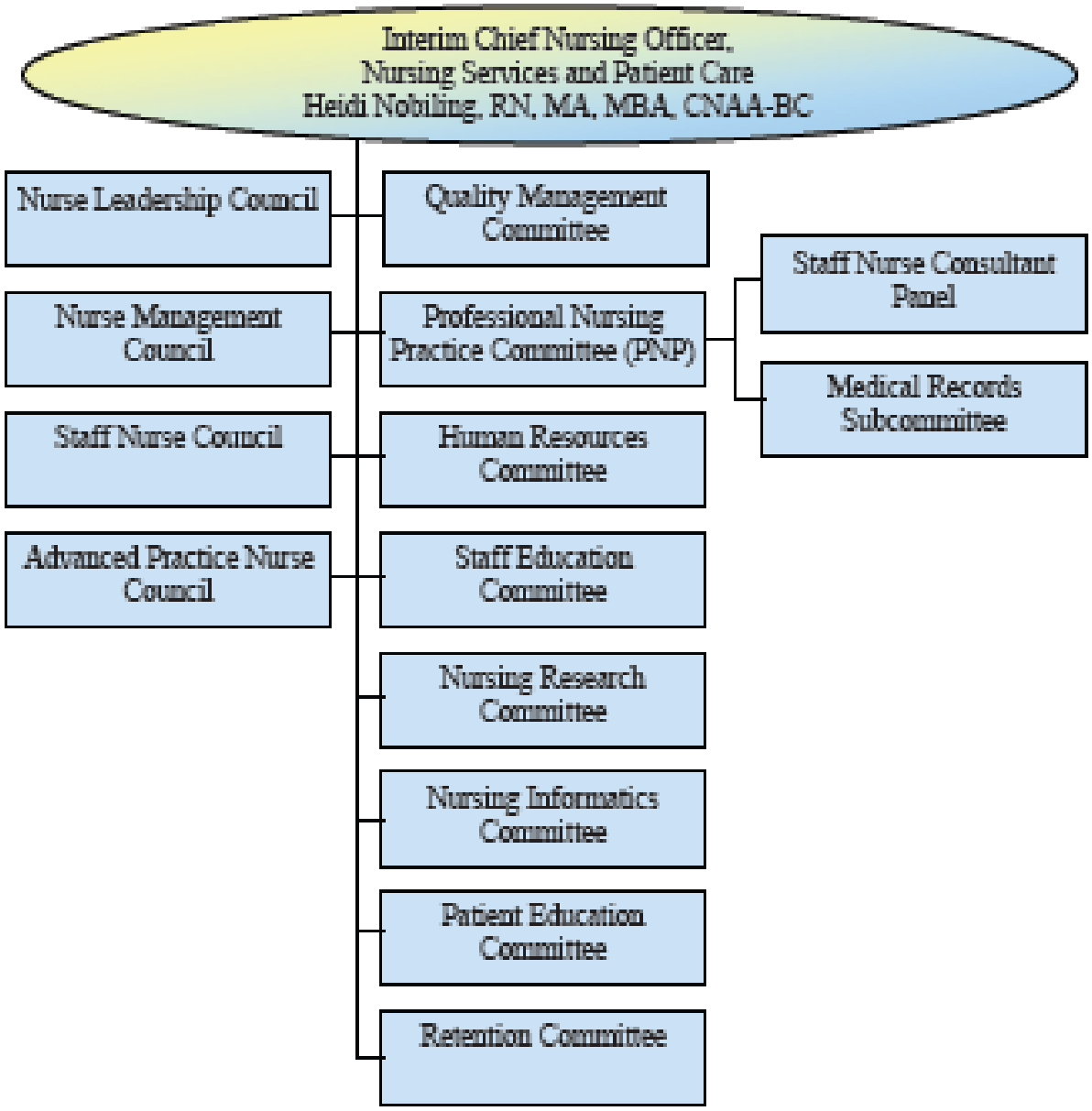
University of Iowa Health Care

Department of Nursing Services and Patient Care
Shared Governance



Implementation of Blood Administration

- National Statistics on Near Misses
  - Errors in blood administration do not adequately reflect the “near misses” caught at the last minute
  - Actual “near miss” occurs approximately
    - 1/8,610 for compatibility
    - 1/27,007 for blood units issued.
  - Causes of transfusions near misses:
    - patient mis-identification at phlebotomy (47.6%)
    - mislabeled specimens (23.8%)
    - mis-identification at final infusion of the blood product (9.6%)

(Bojie & Urganiak, 2000)

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Root Causes

- Incomplete patient/blood verification
- Faulty laboratory procedures
- Insufficient staff training
- Inadequate number of staff
- Improper use of equipment
- Inadequate management of information

(JCAHO, 1999)

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National Institute of Medicine and JCAHO

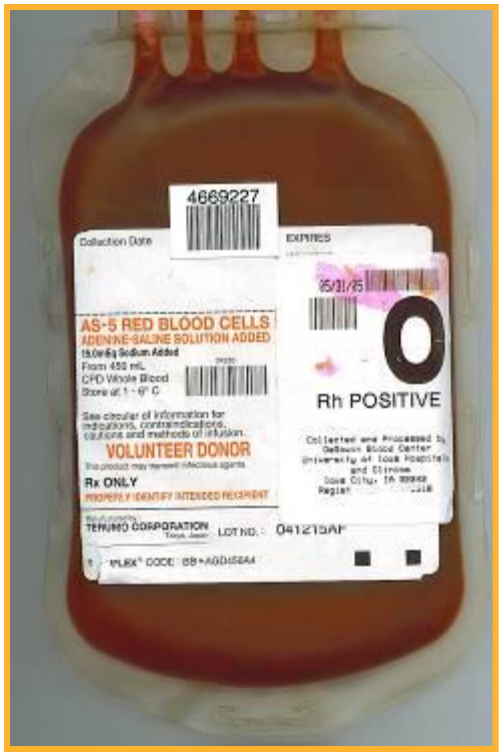
Recommended two major steps to reduce blood component error:

1. Use of barcode scanning technology
2. Accurate identification of patients

Joint Commission
on Accreditation of Healthcare Organizations
Setting the Standard for Quality in Health Care

Blood Administration Process at UI Hospitals and Clinics

- Institutional error rates historically low (1.4 – 1.7 %)
- Errors due to Complex process
  - Multiple steps
  - Requirement of two signatures
  - Transcription errors
  - Handwritten / addressograph



Interdisciplinary Team

- Nursing
- Hospital Information Systems
- Pathology
- Information Technology Services
- Epidemiology
- Clinical laboratory
- Nursing Informatics
- Department of Nursing Research
- Blood Bank Center
- Physicians

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Expectations of Barcode System

- Expected a reduction of at least 73% of errors
- Sample rejection decreased
  - From average 1.82% in the manual system
  - To 0.17% in the automated system.
- ***Improvement of 91%***

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Education Plan

- Goal – teach ALL end users the new process
- ALL Nursing personnel
  - 1326 RNs, NAs, NUCs
- ALL Anesthesia personnel
- ALL Blood Bank personnel
- ALL Pathology personnel
  - Phlebotomists
  - Critical Care Lab staff who dispense blood products

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Educate Bar-code Super Users

- 233 Super Users – 2-hour class
  - Representative from each nursing unit
  - Covered all shifts, including weekends
  - Readily available role models / mentors
  - Assist with troubleshooting / problem-solving
  - Chart of schedule

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Multiple Teaching Strategies

- PowerPoint presentation
- Written hand-outs
- Proficiency testing with return demonstration
- Blackboard Web

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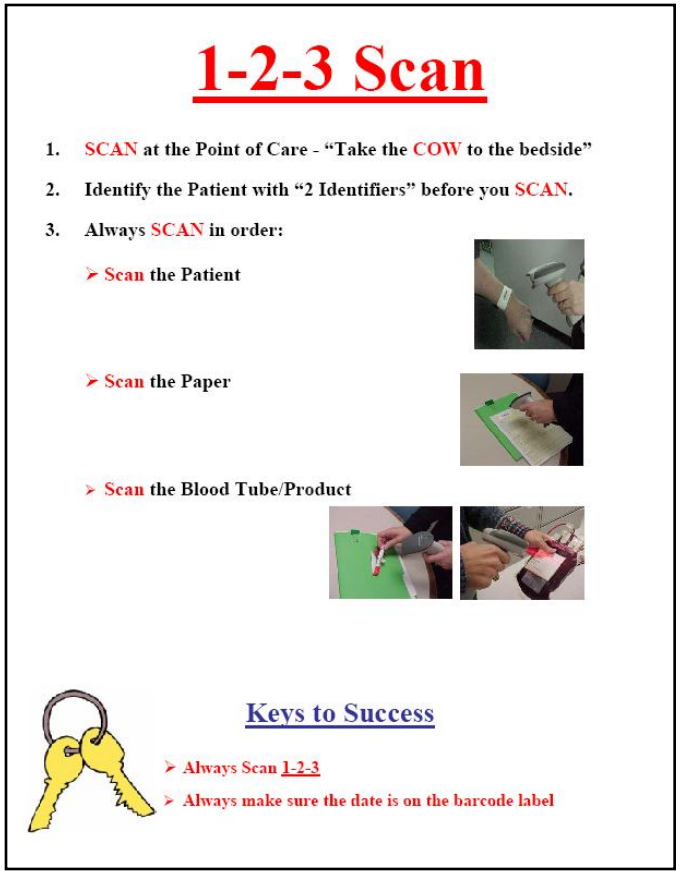
Re-infusion of Bar-code Process

- 5 months post implementation
- Samples sent and not recorded in IPR
- Re-education of Super Users
- Educational tools
  - 1-2-3 Scan Poster / Post-it
  - E-mail broadcast



Evaluation

- Transfusion: Blood Product history
- Skipped steps and prevented errors
- Daily review
- E-mail notification
- Follow-up
- Lessons learned

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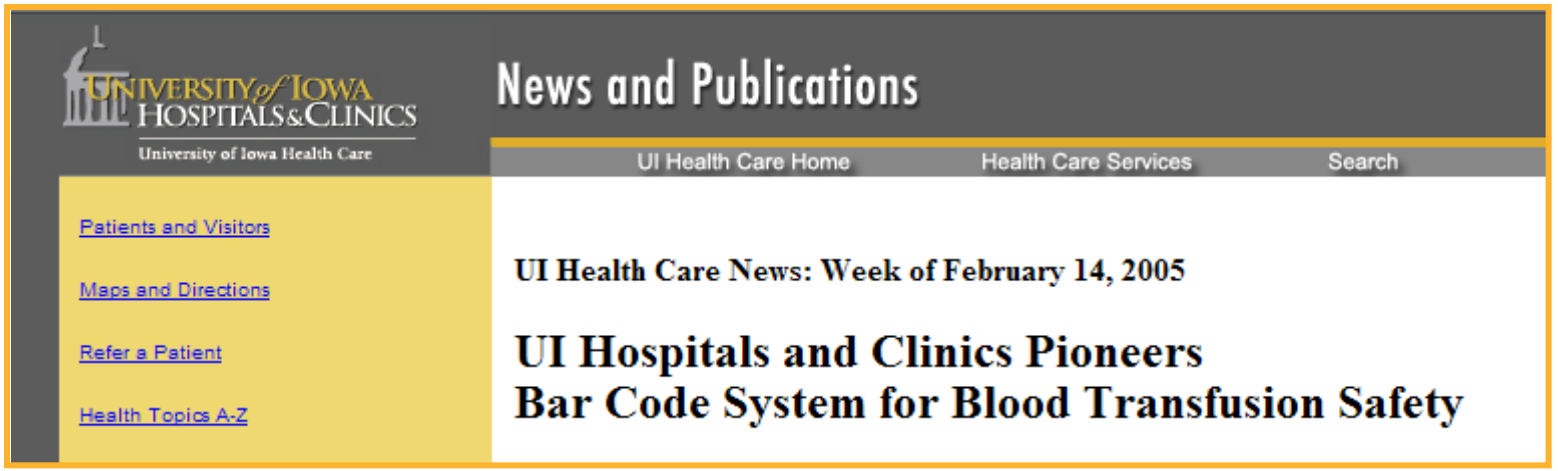
Media Campaign



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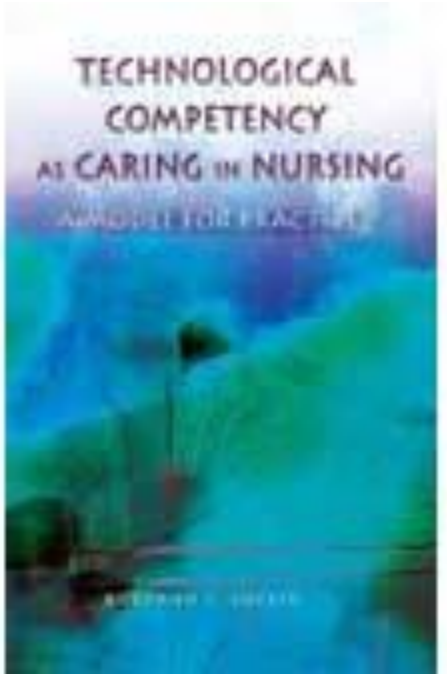
Sustaining Practice
Quality Improvement

- Build into current systems
- Unit ownership of practice
- Daily, monthly, quarterly follow-up
- Updating Policy and Procedure

Sustaining Practice Competencies

- Include in yearly competencies
  - Testing via Blackboard
  - Return demonstration
- QM data will indicate need



Sustaining Practice Orientation

- Nursing orientation
  - Preceptor / Role-model
  - Checklist
- Anesthesia physician orientation
- Return demonstration of process

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Dissemination Results

- To Clinicians
- Quarterly / Periodically
- Posters
- Newsletters
- Quality Management Program
- Professional Community
- Shared Governance Committees / Councils

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Summary

- Investigate
- Implement
  - Include education but don’t make it the sole strategy
- Evaluation Components

http://www.youtube.com/watch?v=SeaCyE9KZAQ

Hmmm...cake crumbs...candle wax...
ice-cream drippings...

All Clues Point TO…

- You can't just whale around willy nilly theorizing, you need the EVIDENCE!

Questions?

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